

# Work Order ID 75834

**\*75834\***

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Tuesday, November 01, 2011 10:57:12 AM

Item ID: D6102-011 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Saddle Billet  
 Start Date: 11/1/2011 Start Qty: 60.00 **\*60\*** Cust Item ID:  
 Required Date: 11/25/2011 Req'd Qty: 60.00 **\*60\*** Customer:  
 Reference:

Approvals: Process Plan: MF Date: 11-1-01 Tooling: Date: Run Start **\*NR1\***  
 QC: Date: SPC (Y/N): Date: Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D6102	Rev D

100		0.00							
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**\*100\*** PURCHASING CL 11/1/01 60

Purchasing Memo 0.00

Purchasing Issue P/O: 15327 a) Description: Aluminum Billetb) 6.500" x 8.250" x 2.500" thickc) Tolerance on all dimensions is +0.06/0.00d) Grain direction along 6.500" lengthe) Material: 6061-T6/T6511 (QQ-A-250/11 or QQ-A-200/8)Material release certifi

110	Receive & Inspect for Damage & Mat'l Certs	0.00							
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**\*110\*** Packaging P 11/1/11 60

Packaging Memo 0.00

Packaging Ensure material certification is attached

120	QC6- Inspect dimensions to drawing	0.00							
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**\*120\*** QC 60

Quality Control Memo 0.00

Quality Control Check certification to Dwg D6102 for compliance

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 75834

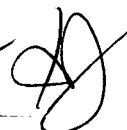
**\*75834\***


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Tuesday, November 01, 2011 10:57:12 AM

Item ID: D6102-011 Accept **\*N900040100\*** Setup Start **\*NS1\***  
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 Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 <b>*130*</b> Packaging Packaging	Identify as per dwg & Stock Location: <u>MAT47</u>  Memo	0.00  0.00		<u>on 11/1/14</u>		<u>60</u>	<u>0</u>		
140 <b>*140*</b> QC Quality Control	QC21- Final Inspection - Work Order Release  Memo	0.00  0.00							<u>11/11/15</u> 

11/11/14 

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Tuesday, November 01, 2011 10:57:12 AM

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Work Order ID: 75834

Parent Item: D6102-011

Parent Item Name: Saddle Billet

Start Date: 11/1/2011

Required Date: 11/25/2011

Start Qty: 60.00

Required Qty: 60.00

Comments: IPP A04.08.19New issueKJ/JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6102-011P 6061-T6 8.25x6.5x2.5		Purchased	No			110	Each	0.0000	1	60			

*Re 11/1/11 (60)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

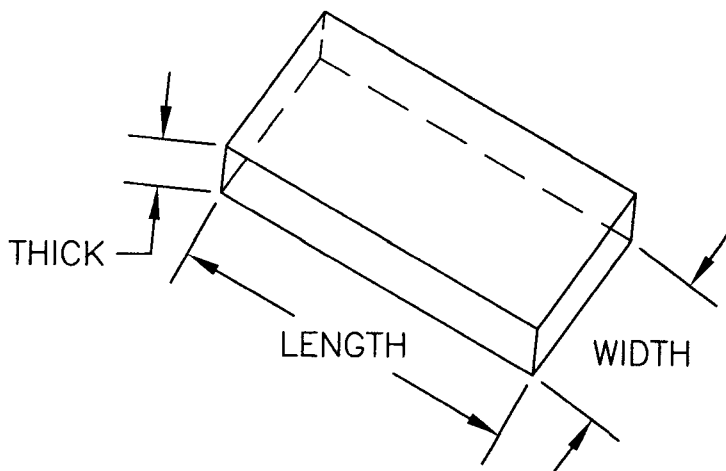
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

DESIGN #	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED CP	APPROVED #	DRAWING NO. D6102	Rev. D SHEET 1 OF 1
DATE 06.06.30		TITLE SADDLE BILLET, 6061	SCALE NTS
A	01.03.30	NEW ISSUE	
B	03.10.20	ADD D6102-005/-007/-009	
C	04.08.25	ADD D6102-010/-011	
D	06.06.30	ADD D6102-013	

## SPECIFICATION CONTROL DRAWING



# 75834

RELEASED

06.08.15 #

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.06/-0.00), AND GRAIN DIRECTION AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.06/-0.00.

ALL DIMENSIONS ARE IN INCHES.

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6102-001	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.880	6.250	2.000	Along 7.880 Length
D6102-003	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.000	6.250	2.000	Along 6.000 Length
D6102-005	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	47.85	15.250	1.000	Along 47.85 Length
D6102-007	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.500	7.000	2.500	Along 7.500 Length
D6102-009	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	11.000	6.000	5.000	Along 11.000 Length
D6102-010	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.950	8.250	2.500	Along 7.950 Length
D6102-011	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.500	8.250	2.500	Along 6.500 Length
D6102-013	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.500	7.000	2.000	Along 6.500 Length

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**Castle Metals®**

A. M. Castle &amp; Co.

## PACKING SLIP

Page 1 of 1

Shipment No:1057879

<b>Ship From:</b> A. M. Castle & Co. (Canada) Inc. MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		<b>Sold To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		<b>Ship To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		<b>Deliver To:</b> DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
<b>Date Shipped</b> 09-NOV-2011	<b>F.O.B.</b> ORIGIN	<b>Freight Terms</b> Prepaid		<b>Carrier</b> MANITOULIN		<b>BOL No</b> 1057879-2	

<b>Shipment Details</b>	<b>Final Destination Branch - MON</b>
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<b>Order No</b> 1806491	<b>Line No</b> 2	<b>Item No</b> 14670.MO	<b>Description</b> 2.5000.PL.6061.T651.ALUMINUM.48.5000.144.5000 / CUT 2SIDED TO 8.25 IN ( + .0310/- .0000 IN (GRAIN TO RUN ALONG 6.5")) X 6.5 IN ( + .0310/- .0000 IN (GRAIN TO RUN ALONG 6.5")) - ALUMINUM PLATE SAW SPECIFICATIONS: QQ-A-250/11		
<b>Purchase Order No</b> 15327		<b>Part Number</b> YOUR ITEM NUMBER: D6102-011		<b>Ordered Qty</b> 60.00 PCS	<b>Invoice Qty</b> 60 PCS

<b>Details</b>		SHIP AS SOON AS POSSIBLE					
<b>Delivery No.</b>	<b>Mill</b>	<b>Heat Number</b>	<b>Mech Id</b>	<b>PCS</b>	<b>Width (IN)</b>	<b>Length (IN)</b>	<b>Shipped Qty(LBS)</b>
103011386		511592A8		51			686.13
103011386		511592A8		9			121.08

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.	
We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.	
Reviewed by Authorized Castle Metals Representative:	Date: Name:



# KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

## CERTIFIED TEST REPORT

Serial Number  
4227455

### ALLOY LIMITS

	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
6061												
MIN	0.40	0.0	0.15	0.00	0.8	0.04	0.00	0.00	0.00	0.00	EACH	0.05
MAX	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.05	TOT	0.15

Aluminum Remainder

### TEST NOTES

6061 sheet or plate certified to AMS 4025, AMS 4026, or AMS  
4027 also meets applicable requirements of AMS-QQ-A-250/11  
Rev.A.

### Castle Metals FP

HEAT NUMBER 51159248  
MECHANICAL ID \_\_\_\_\_  
ITEM CODE 14676  
LOT NUMBER \_\_\_\_\_  
PO NUMBER 109372  
RECEIPT DATE 6-6-2011  
SUPPLIER KAISER  
SPECIFICATION \_\_\_\_\_  
LCS 20  
COMMENT \_\_\_\_\_  
APPROVED PL

### CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE UNITED STATES OF AMERICA OR A QUALIFYING COUNTRY PER DFARS 225.872-1(a), WAS MANUFACTURED IN THE UNITED STATES OF AMERICA, AND MEETS THE REQUIREMENTS OF DFARS 252.225 FOR DOMESTIC CONTENT. THIS MATERIAL HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTIRE ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED.



BILL POYNOR, LABORATORIES SUPERVISOR



## SHIP TO:

AM CASTLE & CO  
3400 NO WOLF ROAD  
FRANKLIN PARK, IL 60131

# KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

## CERTIFIED TEST REPORT

## SOLD TO:

AM CASTLE & CO- SOLD TO  
1420 KENSINGTON RD  
SUITE 220  
OAK BROOK, IL 60523

Serial Number

4227455

CUSTOMER PO NUMBER: 109372		WORK PACKAGE:	CUSTOMER PART NUMBER: 14670 AMC A96061-162		SHIP RUN/LOAD: 102059/16	GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1116416	LINE ITEM: 2	SHIP DATE: 25-MAY-2011	ALLOY: 6061	CLAD: BARE	TEMPER: T651	PRODUCT DESCRIPTION: KaiserSelect® Precision Plate	
WEIGHT SHIPPED: 10412 LB	QUANTITY: 6 PCS EST.	B/L NUMBER: 2032187	GAUGE: 2.5000 IN		DIAMETER/WIDTH: 48.500 IN	LENGTH: 144.500 IN	

### Certified Specifications

AMS 4027/RevN

ASME SB 209/Rev2004

ASTM B 209/Rev07

Test Code: 1511

### Test Results

Lot: 511592A8    Cast 049    Drop 56    Ingot 2    Melted in USA

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T651	LT / 2 (Min:Max)	49.4 : 49.7 (341 : 343)	44.9 : 45.1 (310 : 311)	12.7 : 13.6

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.75	0.5	0.34	0.07	1.1	0.18	0.07	0.03	0.01	0.00	TOT 0.08

Lot: 511673A6    Cast 049    Drop 51    Ingot 2    Melted in USA

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T651	LT / 2 (Min:Max)	49.5 : 49.6 (341 : 342)	44.8 : 44.9 (309 : 310)	13.4 : 13.5

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.72	0.5	0.30	0.07	1.0	0.19	0.08	0.03	0.01	0.00	TOT 0.08

